REMARKS

Reconsideration and allowance of the above-identified application are respectfully requested. Claims 1-10 remain pending.

Applicant appreciates the Examiner's indication of allowable subject matter in dependent claims 2, 3, 6 and 7.

However, claims 1, 4, 5 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,088,383 to Suzuki et al. in view of U.S. Patent No. 5,724,384 to Kim et al. Furthermore, dependent claims 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Suzuki and Kim patents in further view of published U.S. Patent Application No. 2004/0009749 to Arazi. These rejections are respectfully traversed.

Specifically, as discussed in more detail below, Applicant respectfully submits that the Suzuki patent fails to teach or suggest, among other things, a first correlation circuit or first correlation operation that correlates a received signal with a first reference sequence and outputs *an intermediate correlated signal that is then correlated by a second correlation circuit or second correlation operation to output a correlated signal.* The Kim patent and published Arazi patent application also fail to make up for these deficiencies in the teachings of the Suzuki patent. Furthermore, as admitted by the Examiner, the Suzuki patent fails to teach or suggest a threshold generating circuit and correlation circuit, or their respective operations, as claimed, and the Kim patent and published Arazi patent application fail to make up for the deficiencies in these teachings.

The rejections will now be discussed in more detail.

As discussed in the Remarks of the previous Amendment, the embodiments of the present invention provides a system and method for enabling a node that is operable in a wireless communication network to adaptively detect a signal in the presence of interference. An input signal is provided to a correlation circuit 124 that correlates the signal with a reference sequence and provides an intermediate correlation signal to a second correlation circuit 125. The second correlation circuit 125 correlates that intermediate correlation signal with a second reference sequence and thus outputs a correlated signal. That correlated signal is then compared to a threshold value generated by a threshold generating circuit to determine whether the signal includes the desired data signal. These features are expressly recited in independent claims 1 and 5.

The Suzuki patent teaches a spread-spectrum signal demodulator. As shown in Figure 1, the demodulator comprises a plurality of first correlation detecting means 111 through 11K, and a plurality of interference cancellers 21 through 2M. Each interference canceller 21 through 2M includes replica signal generating means 121 through 12K, signal strength suppressing means 131 through 13K, a replica signal subtracting means 140, delay elements 191 through 19K, and a plurality of second correlation detecting means 151 through 15K. The Examiner contends that the first correlation detecting means 111 through 11K correspond to the claimed "first correlation circuit" and the second correlation detecting means 151 through 15K correspond to the claimed "second correlation circuit." Applicant respectfully disagrees.

Applicant respectfully submits that column 7, lines 22-65 of the Suzuki patent that was cited by the Examiner states that the spread spectrum signals output by the first correlation detecting means 111 through 11K are received by the replica signal generating means 121

through 12K that generate replicas of those spread spectrum signals. The replica signals are then provided to the signal strength suppressing means 131 through 13K that suppress the strength of the output signals from the replica signal generating means 121 through 12K. As described in column 7, lines 46-49, replica signal subtracting means 140 subtracts the sum of the output signals from the signal strength suppressing means 131 to 13K from the received signal that was delayed by delay element 190. The output of the replica signal subtracting means 140 is then received by the second correlation detecting means 151 through 15K which, as described in column 7, lines 60-65, detect correlations between the signal output from the replica signal subtracting means 140 and "the spreading codes assigned to the respective spread spectrum signals contained in the received signal."

Applicant therefore respectfully submits that the inputs to the second correlation detecting means 151 through 15K cannot reasonably be construed as an "intermediate correlated signal" as recited in independent claims 1 and 5 of the present application, nor is it reasonable to construe the second correlation detecting means 151 through 15K as comparing an "intermediate correlated signal" with a "second reference sequence" as also recited in independent claims 1 and 5. It is noted that as described in column 7, lines 55-60, the replica signal generating means 121 through 12K generates the replica signals "by re-spreading the correlations detected by the first correlation detecting means 111 to 11K in timed relation to respective transmitted symbol timings with the spreading codes." Accordingly, Applicant submits that the signals that are output by the replica signal generating means 121 through 12K are not the correlated output of a first correlation detecting means 111 through 11K but a re-spread signal that is no longer in the delay-domain, but is in the time-domain. Hence, as can be appreciated by one skilled in the art,

the signals output by the replica signal generating means 121 through 12K are not correlated signals, but represent a received signal that was reconstructed based on timing information extracted by the first correlation detecting means 111 through 11K.

In addition, Applicant respectfully notes that the Examiner admits that the Suzuki patent fails to teach or suggest a threshold generating circuit and comparison circuit as claimed. Nevertheless, the Examiner relies on the Kim patent as allegedly teaching these features, and contends that one skilled in the art would have found it obvious to modify the Suzuki patent in accordance with the teachings of the Kim patent to achieved the present invention as claimed. Applicant respectfully disagrees.

Applicant submits that the Kim patent teaches a pseudo-noise synchronization device that uses an adaptive threshold to generate a stable pseudo noise code synchronization of a received spread spectrum signal by varying the threshold in accordance with a variance in the received spread spectrum signal. The Examiner contends that threshold generator circuit 300 and comparator 233 shown in Figure 2 and described in column 6, lines 45-67 and column 7, lines 30-55 of the Kim patent correspond to the claimed threshold generating circuit and comparison circuit, and that it would have been obvious to employ these circuits in the Suzuki apparatus. Applicant respectfully disagrees.

Applicant notes that as described in column 7, lines 30-35 of the Kim patent, the threshold generator 300 generates a threshold based on the correlation between the punctual pseudo nose code and the I-channel and Q-channel reception signals. As described in column 7, lines 36-38, the comparator 233 compares the punctual signal of a square root circuit 231 with the threshold generated by the threshold generator 300 to determine whether initial

synchronization of the pseudo noise signal has occurred. Applicant respectfully submits that nowhere does the Suzuki patent teach or suggest the need for this type of threshold generator 300 and comparator 233 for purposes as described in the Kim patent.

Moreover, Applicant respectfully submits that absent knowledge of the present claimed invention, taken in hindsight, one skilled in the art would not have been motivated to modify the Suzuki circuit to employ a threshold generating circuit that would "generate a threshold value based on an estimation of he variance of said intermediate correlated signal over time" and a comparison circuit that would "compare said correlated signal to said threshold value to determine whether said received signal includes said data signal" as recited in independent claim 1 and in method format in independent claim 5 of the present application. Again, nowhere does the Suzuki or Kim patents teach or suggest that the threshold generator and comparator should be used in conjunction with first or second correlation circuits for the purpose of identifying the presence of a data signal in a received signal as claimed.

For all these reasons, Applicant respectfully submits that one skilled in the art would not have found the embodiments of the present invention even as defined in independent claims 1 and 5 obvious in view of the teachings of the Suzuki and Kim patents. Accordingly, all claims should be allowable.

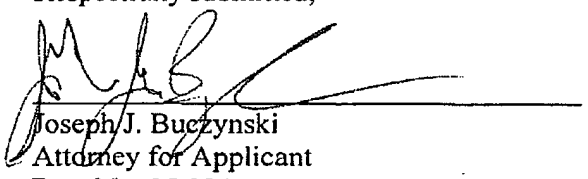
Concerning the rejected dependent claims 4 and 8, Applicant respectfully submits that both the Suzuki and Kim patents fail to teach or suggest a comparison circuit that detects the presence of a data signal in the received signal based on a comparison of the correlated signal to the threshold. The Suzuki patent is completely silent with regard to this feature, and as described above, the comparator 233 taught by Kim compares the punctual signal of a square root circuit

231 with the threshold generated by the threshold generator 300 to determine whether initial synchronization of the pseudo noise signal has occurred.

Concerning the rejection of claims 9 and 10, Applicant respectfully submits that these claims do not recite "Bluetooth wireless" as the Examiner contends. Moreover, Applicant respectfully submits that the published Arazi patent application is being cited merely for its teachings of a Bluetooth wireless network, and its teachings do not make up for the deficiencies in the teachings of the Suzuki and Kim patents as discussed above with regard to independent claims 1 and 5. Accordingly, all claims should be allowable over these references.

In view of the above, it is believed that the subject application is in condition for allowance, and notice to this effect is respectfully requested. The Examiner is invited to contact the undersigned with any questions at the number indicated below.

Respectfully submitted,



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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this RESPONSE (along with any documents referred to as being attached or enclosed) is being facsimile transmitted to the U.S. Patent & Trademark Office, Attention: Examiner Tuan PHAM, Art Unit 2643, Facsimile Number 571-273-8300, on the date shown below:

Date: November 17, 2005

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